METHOD AND APPARATUS FOR THE DETECTION AND CLASSIFICATION OF IMPAIRMENTS ON AN RF MODULATED NETWORK

ABSTRACT OF THE DISCLOSURE

A method and apparatus for detecting and classifying RF impairments on the upstream path of a communication system is provided. The detection system detects frequencies with common path distortion impairments, and a system manager avoids transmission over those frequencies or adapts transmissions accordingly. Subsequently, periodic impairments on the upstream path are detected. Detection of periodic impairments triggers the system manager to schedule no traffic during impairment periods, schedule low priority traffic during impairment periods, and/or adjust the physical layer parameters of traffic transmitted during an impairment period in order to increase robustness only when necessary. Finally, non-periodic or random impairments are detected on the upstream path and global parameter changes are made to adapt to non-predictable impairments. Each of the impairment types is then further classified to assist an operator of the system in determining the physical source of the impairment.

P:\USERS\TFIALA\Broadcom\1875.1460001\Application\A291-55.wpd